

Multiple sequence alignment PS01124, HTH_ARAC_FAMILY_2..

AARP_PROST/22-120	SEILVWIEGNLTNR.....LSLDDIAQHSQYTKWHLQVFRKIVGMPLGEYIRRRRI
ADA_ECOLI/85-183	DKITHACRLLEQETP.....VLEALADQVAMSPFHLHRLFKATGMTPKAMQQAARA
ADA_MYCTU/87-185	ARAMELIADGTDR.....DGVSGLAQGLGYTIRQLERLLQAVVGAGPLALARAQRM
ADA_SALTY/94-183	-----LEQET.....PVTAFQAQAVAMSPFHLHRLFKASTGMTPKGQQAARA
ADAA_BACSU/102-200	DLITEYIDKNFTEK.....LTLESADICHGSPYMHRTFFKIKGITLVEYIQQVRV
ADIY_ECOLI/149-246	DSVQIIESDIHKD.....WNLSMVASCLCLSPSLKKKLKSENT-SYSQIITTCRM
AGGR_ECOLI/164-261	DKVRNTIEKLSKR.....WTLAIADFNVSSEITIRKRLSEYI-TFNQILMQSRM
APPY_ECOLI/139-236	CKITGIISFNIERQ.....WHLKDIAELIYTSLSIKKRLDEGT-SFTEILRDTRM
ARAC_CITFR/180-279	RDACQYISDHLADSN.....FDIASVAQHVCCLSPSLSHLFRQQLGISVLSWREDQRI
ARAC_ECOLI/180-279	REACQYISDHLADSN.....FDIASVAQHVCCLSPSLSHLFRQQLGISVLSWREDQRI
ARAC_ERWCH/186-284	IEACQYITSNLAGS.....LRIDEVARHVCLSPSLSHLFRQQLGISVLSWREDQRI
ARAC_SALTY/180-279	RDACQYISDHLADSH.....FDIASVAQHVCCLSPSLSHLFRQQLGISVLSWREDQRI
ARAL_STRAT/202-300	ASALTFLHRDPAPS.....WTVAELASAAVSRSTLAARFKATVGGQPLEYLTRWRI
ARAL_STRLI/202-300	ATALTCLHRDPAPS.....WTVADLADTAAVSRSTLAARFKATVGGQPLEYLTRWRI
CAPR_YERPE/8-107	NSIIQYIEENLESKF.....INIDCLVLYSGFSRRLQISTKRYVGMPIGYIRVRA
CELD_ECOLI/168-274	DDVPQWLKSTVEKMHDKegfesaLENMVALSAKSQBYLTRATQRYGKTPMQIINEIRI
CFAD_ECOLI/164-261	DKVRNVIEKDLRSK.....WTLGIIADAFNVSEITIRKLESENT-NFNQILMQLRM
CSVR_ECOLI/166-263	DKVRGVIEKDLRSK.....WTLAIADVFNVSSEITIRKLESENT-NFNQILMQSRM
ENVY_ECOLI/149-246	DSVCRIIQSDIQHY.....WNLRIVASSLCLSPSLKKKLKKNENT-SYSQIVTECRM
EUTR_ECOLI/243-344	SRAREYVLENMSEP.....VTVDLCNQLHVSRRTLQNAFHAIIIGIGPNANLKRIRL
EUTR_SALTY/243-344	SRAREYVLENMSEP.....LTVDLCNQLHVSRRTLQNAFHAIIIGIGPNANLKRIRL
EXSA_PSEAE/171-269	ERLQLFEMERHYLNE.....WKLSDFSREFGMLTTFKELFGSVYGVSPRAWISERRI
FAPR_ECOLI/154-251	ERIVTLLFSDLTRK.....WKLSDIAEEMHISEISVRKLEQECCL-NFNQLILDVRM
FEAR_ECOLI/199-299	QKVVTLIDNNIREEI.....LRPEWIAGETGMVSRSLYRNMFADKGL-VVAQYIRNRRL
GADX_ECO27/145-242	TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKLREEGT-SYSQILLTECRM
GADX_ECO57/145-242	TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKLREEGT-SYSQILLTECRM
GADX_ECOLI/145-242	TRVCTVINNNIAHE.....WTLARIASELLMSPSLKKKLREEGT-SYSQILLTECRM
GLXA_RHIME/223-321	LAVLEKMETAIERP.....LDRTAMARLAGVSPRHLDRLFREHRCGTGFLDTYREIRL
HRPB_RALSO/375-477	RRAYRYTIENIERSd.....LTREVAAHINVTTERALQAFKSAVGMSPSSVIRMRRL
INVF_SALTY/112-210	YWLVGXLLAQSTSG.....NTWRMLGEDYGVSYTHFRRLCSRALGGKAKSELNRWRM
LACR_STAXY/174-272	QHAVDFINTNYQKH.....ITVEDVAKSVNITRSHLTKLFKNLQCSKPKEYLYTIRM
LCRF_YERPE/167-265	ERLQKFWENYVLOG.....WKLKSFAREFGMLTTTKELFGTYVYGISPRAWISERRI
LUMQ_PHOLE/148-246	VLIDNYYIEQHLOKK.....ISVLELSSVAFLAQSQFYALFKSQMGITPHQYVLRKRL
MARA_ECOLI/14-112	HSILDWIEDNLESP.....LSLEKVSERSGYSKWHLQRMFKETGHSLSLQGYIRSRKM

Figure 1A.

MARA_SALTY/14-112
 MELR_ECOLI/194-292
 MMSR_PSEAE/201-299
 MMSR_STRMU/176-274
 MXIE_SHIFT/99-199
 MXIE_SHISO/99-199
 ORUR_PSEAE/241-338
 PCHR_PSEAE/201-296
 PERA_ECO2/168-265
 POOR_SALTY/195-293
 PORR_PROVU/7-107
 RAER_PEDPE/176-274
 RAMA_ENTCL/9-107
 RAMA_KLEPN/9-107
 RHAR_ECOLI/209-307
 RHAR_SALTY/179-277
 RHAS_ECOLI/174-272
 RHAS_SALTY/174-272
 RHRA_RHIME/210-310
 RNS_ECOLI/164-261
 ROB_ECOLI/8-106
 SOXS_ECOLI/7-105
 SOXS_SALTY/7-105
 TQPN_VIBCH/172-269
 TETD_ECOLI/31-129
 THCR_RHOER/227-328
 URER_ECOLI/171-268
 URER_PROMI/171-268
 VIRF_SHIDY/161-258
 VIRF_YEREN/167-265
 VIRS_MYCTU/236-334
 XYLR_ECOLI/288-386
 XYLR_HAEIN/288-386
 XYLS_PSEPU/214-315
 XYS1_PSEPU/214-315
 XYS2_PSEPU/39-140
 XYS3_PSEPU/214-315
 XYS4_PSEPU/214-315

HSILDWIEDNLESP.....LSLEKVSERSGYSKWHLQRMFKETGHSLOQYIRS.XM
 SQMLGFIENYDQA.....LTINDVAEHVKLNANYAMGIFQRMVQMLTKQYITAMRI
 DOLHAYMREHJHAR.....LELERIAAFCNLSKHFVSRKAITGRTPTQHPHLKI
 NOVKKIHSQYSS.....LRVNDIAKLNLSRSLYKIFRKSNTLSIKEYILOVRM
 YHLVLYLLARTIEKEK.....eVRIKSLTEHYGVSEAYFRSLCRKALGAKYKEQNTWRL
 YHLVLYLLARTIEKEK.....eVRIKSLTEHYGVSEAYFRSLCRKALGAKYKEQNTWRL
 TRVRRLALARPGEF.....PDLQAARELHSGRSRLRRLSSLG-TYQQVLDVVRK
 HAARDLLVQALQEP.....PSLDTLASRVGMNPKLTAGFRKRVFGASVGYLQEXRL
 DRVIRKVIDISKN.....WKLGDVSSSMFMSDDSCLRKQNLKENL-TFKKIMLDIKM
 KKALRYIDAHLSDD.....LLEDVASHVTLSPYFSLPKFYQYQIGFNANVRQRM
 NDILKWLTEQLORNe.....SIKIDITANKSGYSKWHLQRIKDFKGCCTLGEYVRKRL
 NLAVSYLQENYSTG.....CTINDLCHYLNLSRSLYTLFKTHANTSPQKLLTKRL
 DTIVIEWIDNHLQEP.....LRIDDIARHAGYSKWHLQRLFLQYKGESLGRYIRERKL
 DTIVIEWIDNHLQEP.....LRIDDIARHAGYSKWHLQRLFLQYKGESLGRYIRERKL
 DXLITRLAASLXSP.....FALDKFCDEASCSERVLRQOFRQQTGMTINQYLRQVRV
 DXLITRLAASLXSP.....FALDKFCDEASCSERVLRQOFRQQTGMTINQYLRQVRV
 NLLAWLEHDHFADE.....VNDVAVADQFSLSLRTHRLQKQQTGLTPQRYLNRRL
 NQMAWLEHDHFADE.....VNDVAVADQFSLSLRTHRLQKQQTGLTPQRYLNRRL
 ASIKRVEQNLANGS.....FSITDVAERITPTRAIKQFFSREGT-TFSRYVLGRRL
 DKVRNLIKDLRSK.....WTLGIADAFNASEITIKRLESENT-NFNQILMQLRM
 RDLLIWLGLHLDQEP.....LSLDNVAKAGYSKWHLQRMFKDVTGHAIGAYIRARRL
 QDLIAMIWIDHIDQEP.....LNIDVAKSGYSKWHLQRMFKDVTGHAIGAYIRARRL
 QDLIAMIWIDHIDQEP.....LNIDVAKSGYSKWHLQRMFKDVTGHAIGAYIRARRL
 EKISCLVKSIDITRN.....NRWADICGELTRNMLKKELESRGV-KFRELINISIRI
 KDVLNIEHNLDQS.....LLDDVANKAGYTKWYFQRLFKKVTGVTLASYPARRL
 RLAVDYLEAHQAQP.....LTVAQVARNVGVSRISLQVGFQNSLGTTPMRQLKIIRM
 QAITHLITQEPQPK.....WHLDDVAKALFTTPTSLRRLHNRREGV-SFRQLLDVVRM
 QAITHLITQEPQPK.....WHLDDVAKALFTTPTSLRRLHNRREGV-SFRQLLDVVRM
 DQIRKIVEKNIEKR.....WRLSDISNNLNLSEIAVRKRLESEKL-TFQQLLDVRI
 ERLOKMEENTYLOQ.....WRLSKFARFPGMLTTFKELFGTVYGISPRAWISERRI
 ERVVGLARLLLTGq.....CSAEIADQDMDHPTLQORRLAAGL-RCHDLIERERR
 IQAMHYIRNHACKG.....IKVDQVLDVAVGISRSNLEKRFKEEVGETIHAMIHAEKI
 IQAMHYIRNHACKG.....IKVDQVLDVAVGISRSNLEKRFKEEVGETIHAMIHAEKI
 ERVVQFIEENLKN.....ISLERLAELAMSPRSLYNLFKXAGTTPKNIYIRNRKL
 ERVVQFIEENLKN.....ISLERLAELAMSPRSLYNLFKXAGTTPKNIYIRNRKL
 ERVVQFIEENLKN.....ISLERLAELAMSPRSLYNLFKXAGTTPKNIYIRNRKL
 ERVVQFIEENLKN.....ISLERLAELAMSPRSLYNLFKXAGTTPKNIYIRNRKL
 ERVVQFIEENLKN.....ISLERLAELAMSPRSLYNLFKXAGTTPKNIYIRNRKL
 ERVVQFIEENLKN.....ISLERLAELAMSPRSLYNLFKXAGTTPKNIYIRNRKL

Figure 1B.

Y4FK_RHISN/318-417
 YA52_HAHIN/194-295
 YBBB_BACSU/166-264
 YBCM_ECOLI/165-262
 YCGK_ALTCA/67-163
 YD95_MYCTU/242-343
 YDEO_ECOLI/137-233
 YDIP_ECOLI/183-281
 YEAM_ECOLI/158-258
 YFIF_BACSU/192-289
 YHIW_ECOLI/139-236
 YIDL_ECOLI/197-295
 YIJO_ECOLI/172-270
 YISR_BACSU/183-281
 YKGA_ECOLI/19-117
 YKGD_ECOLI/177-278
 YMCR_STRLA/184-281
 YPDC_ECOLI/184-282
 YQHC_ECOLI/213-311

AARP_PROST/22-120
 ADA_ECOLI/85-183
 ADA_MYCTU/87-185
 ADA_SALTY/94-183
 ADAA_BACSU/102-200
 ADIY_ECOLI/149-246
 AGGR_ECOLI/164-261
 APPY_ECOLI/139-236
 ARAC_CITFR/180-279
 ARAC_ECOLI/180-279
 ARAC_ERWCH/186-284
 ARAC_SALTY/180-279
 ARAL_STRAT/202-300
 ARAL_STRLI/202-300
 CAFR_YERPE/8-107
 CELD_ECOLI/168-274

Figure 4C.

LKAEATVRENLTNP.....VTIEDLAAARCTPRAIQMFRTYRGSPMSVLCNYRL
 KRLNTALIALLOQPT.....dWHIEQLAEATMSRANFRIRIFOQHIGMSPGRFLTKVRL
 EKTXYIETHADTK.....ITLAQLSQVAGISAKHYSESFKKWTQSQSVTEFTKTRI
 SRCYNLLSEPGTK.....WTANKVARYIYISVSTLHRRRLASEGV-SFQSILDDVRL
 ONAMLYTENNYND.....INIDTVAFSGVSRSTLVKQFKLATNKTINNRIEVR
 RGITAVRSKLFDRDS.....1FPTFDVAGELDMHPRIARRLAEEGT-SFRALLGEARS
 GKVRNIVNMKPAHP.....WKLKDICDCLYISESLKKLKKQEQT-TFSQILLDARM
 KOILFYLNNNYREK.....ITLEQLSKFRASVSYCHEFTKEYRISPINVVIQRRM
 PKIRNVEMMARKPYE.....WGALQWAGFFAMSERNLARLIVKETGLSFRWQOQLQL
 TEVKLHIKDNLSQ.....LKLTDVASHFHISGRHLSRLFAELGVSYSEFVQNEKI
 GKVERLISFDIAK.....WYLRDIARMYTESLKKKLODENT-CFSKILLASRM
 EKLJATLHASLQOR.....WSVADMAATIPCSEAWLRRLFLRYTGKTPKEYYLDARL
 EAIRDYIDERYASA.....LTRESVAQAFYISPNVLSHLFQKTGAIGENEYLNHTRL
 WEARLYOEHYEK.....TTIKOLSLALHYHQDYVSRQOVLGVTTPAQYTNVRM
 QOLLEWIECNLEHP.....ISIEDIAQKSGYSRNTIQLLFRNFMHVPLGEYIRKRRL
 PRLGAVIQOQLEMPgh.....awTVESLASIAHMSRASFQALFRDVSQGTTPDLAVLTKRL
 DPLRAVVVSLEAG.....RSVTATADSVGLGARQLHRRSLAAGYGPKTLARVLRM
 HSICNVQDNVAQP.....LTRESVAQFFNITTNHLSKLFQAGHGMRFIEYVRWVRM
 SRVLKRIENKYTEN.....LSVEQLAAEANMSYSAFHNFKSVTSTSPLOYLKNYRL

CEAAKELQTNL...QVIDIALKYQFSQQSFAXKFKAYLGISPSLYRLS
 RRLRESLAKGE-...SVTTSILNAGFPDSSSYTKADETLGWTAKQFRHG
 QTAHVLIETNL...PFGDVAFAGESSIROFNDTVRLACDGTPTALRAR
 RRLREALAKGE-...PITAAIYRAGFPDSSSYRHHADQTLGWTAKQFRKG
 HAAKKYLIQNK...AIGDIAICVGIANAPYFIFLKKKTGOTPARFRQM
 RYAVNELMMDGK...NISQVSQSGYNSTSYFISVFQDFYGMTPLHYVSQ
 SKAALLLDNSY...QISQISNMIGFSSSTSYFIRLFVXHFHITPKQFLTY
 RYAKKLITSNSY...SINVVAQKCGXNSTSYFICAFKDYGVTPSPHYFEK
 SOAKLLILSTRM...PIATVGRNVGFDQDLYFSRVFKKCTGASPSSEFRAG
 SOAKLLILSTRM...PIATVGRNVGFDQDLYFSRVFKKCTGASPSSEFRAG
 IRAKLLILQTOE...SIANIGRVVGDQDLYFSRVFKKCTGASPSSEFRAG
 SOAKLLILSTRM...PIATVGRNVGFDQDLYFSRVFKKCTGASPSSEFRAG
 ELTARQUREGSA...PLAAIAHSVGYGSESALSVAFKRVLGMNPGDYRKH
 ELAARQUREGNA...TLASIAHSVGYGSESALSVAFKRVLGMNPGDYRKH
 SRAALLRLTRL...TIEISAKLFYDSQQTFTREFKKIFGYTPRQYRMI
 NFAKKQLEMTNY...SVTDIAFEAGYSSPSLFIKTKFKULTSFTPKSYRKK

CFAD_ECOLI/164-261
 CNV_ECOLI/166-263
 ENVY_ECOLI/149-246
 EUTR_ECOLI/243-344
 EUTR_SALTY/243-344
 EXSA_PSEAE/171-269
 FAPR_ECOLI/154-251
 FEAR_ECOLI/199-299
 GADX_ECO27/145-242
 GADX_ECO57/145-242
 GADX_ECOLI/145-242
 GLXA_RHIME/223-321
 HRPE_RALSO/375-477
 INVF_SALTY/112-210
 LACR_STAXY/174-272
 LCRF_YERPE/167-265
 LUMQ_PHOLE/148-246
 MARA_ECOLI/14-112
 MARA_SALTY/14-112
 MELR_ECOLI/194-292
 MMSR_PSEAE/201-299
 MMSR_STRMU/176-274
 MXIE_SHIFL/99-199
 MXIE_SHISO/99-199
 ORUR_PSEAE/241-338
 PCHR_PSEAE/201-296
 PERA_ECO27/168-265
 POGR_SALTY/195-293
 PORA_PROVU/7-107
 RAPE_PEDPE/176-274
 RAMA_ENTCL/9-107
 RAMA_KLEPN/9-107
 RHAR_ECOLI/209-307
 RHAR_SALTY/179-277
 RHAS_ECOLI/174-272
 RHAS_SALTY/174-272
 RHRA_RHIME/210-310
 RNS_ECOLI/164-261

Figure 4.

SKAALLLENSY...QISQISNMIGISSASYFIRVFNKHYGVTPKQFFTY
 SKAALLLENSY...QISQISNMIGISSASYFIRFNKHFVTRSSFLII
 RYAVOMLMDNK...NITQVQLCGYSTSYFISVFKAFYGLTPIYLAK
 NAVRRELISPNSqsmTKDAAMQWGFHILQGFATDYQQLFSEKPSLTHQ
 NAVRRELISPNSqsaTKDAAMQWGFHILQGFATDYQQLFAEKPSLTHQ
 LYAHQLLNSDM...SIVDIAMEAGFSSQSYFTQSYRRFGCTPSRSRQ
 NQAAKFIIRSDH...QIGMIASLVGYSVSFYIKTFKFIYGVTPKKFEIG
 DFCADATRHADD.eKLAGIGFHMFGSDQSHFSTVFKQRFQGMTPGEYRRK
 ORALQLIVIGV...SIXRVAVSCGHSVSFYTYVFRNYYGTMPTTEYQER
 ORALQLIVIHGF...SIXRVAVSCGHSVSFYTYVFRNYYGTMPTTEYQER
 ORALQLIVIHGF...SIXRVAVSCGHSVSFYTYVFRNYYGTMPTTEYQER
 RHARLLQOSPL...SIFEIAYATGFSSPAHFNKAFKLFQSGSLRRR
 EGIRSDLLDSERNpNIIDTASRWGIRSRALVKGKQFNEAPSETIWR
 AQSLNSVEGHE...NITQLAVNHGYSSPSHFSSEIKELIGVSPRKLNSI
 YHASQLLHTST...LISDISRQVGYKDPDLLFSKNFTKHFESASEYRHH
 LYAHQLLNGKM...SIVDIAMEAGFSSQSYFTQSYRRFGCTPSQARLT
 DLAKQLIAERQK...PLSQVQLCGFSSQSSQSFQAFRRLYGMSPTRYOFF
 TEIAQKLKESNE...PILYLAERYGFESQQLTTRTFKNTFYDVPCHKYMT
 TEIAQKLKESNE...PILYLAERYGFESQQLTTRTFKNTFYDVPCHKYMT
 NHVRALLSDTK...SILDIALTAGRSSRSRFSYTFGKVGWMSPOQYRKL
 EYACQLDSSDQ...SVARVGQAVDDSYFSLFSLFKVMGLSPSAYRQR
 KRSQYLLNPKL...SIAEISNSVGFSDSLAFSKAFKNTFGKSPSKFRKE
 VNGLLDVFLHNQ...TITSAAMNNGYRSTSHFSNEIKTRIGFSARELSNI
 VNGLLDVFLHNQ...TITSAAMNNGYASTSHFSNEIKTRIGFSARELSNI
 RLALQYLTTLTQL...PLYEIALLLGFNDSSNFRRAFRKWTGKLPSPDYREA
 REAHMWCDEEA...NVSTVAVRGYS-PAHFSIAFRKRYGISPSEIR--
 KHASLFLRTDK...NIDEISCLVGFNSTSYFIKVFKEYVNTTPKKYNGV
 VSARELLCHSDW...SIAIARNLIGFSQTSYFCKVFRQTYQVTPQAYRQQ
 LEAAKSLQEKOM...SILDIALMVGFSQATFTTRIFKKHFTTTPAKFREN
 EDARQLSTSN...SVQSIANNVGYKDSFTFSKAFKRYSGASPSYRKS
 LLAARDLRESDE...RVYEICLRYGFESQQTFTTRIFTTFHOPPGAYRKE
 LLAARDLRDQD...RVYDICKYGFDSQQTFTTRVFTTRTFNPPGAYRKE
 CHAQYLLQHSRL...LISDISTECGFEDSNYSVFTRETGMTPSQWRHL
 CHAQYLLQHSPL...MISEISMOCGFEDSNYSVFTRETGMTPSQWRHL
 MKARHLIRHSEA...SVTDIAYRCGFSNHSFTLFRFEFNWSPDIRQG
 IKARHLIRHSDH...SVTEIAYRCGFSNHSFTLFRFEFNWSPDIRQG
 SLAKSLILAEGEA.tSISQIAYNVGENDLSYFNTRFSRYGVRPSDLRL
 SKAALLLENSY...QISQISNMIGISSASYFIRFNKHYGVTPKQFFTY

ROB_ECOLI/8-106
 SOXS_ECOLI/7-105
 SOXS_SALTY/7-105
 TCEN_VIBCH/172-269
 TETD_ECOLI/31-129
 THCR_RHOER/227-328
 UBER_ECOLI/171-268
 UBER_PROMI/171-268
 VIRF_SHIDY/161-258
 VIRF_YEREN/167-265
 VIRS_MYCTU/236-334
 XYLR_ECOLI/288-386
 XYLR_HAEIN/288-386
 XYS_PSEPU/214-315
 XYS1_PSEPU/214-315
 XYS2_PSEPU/39-140
 XYS3_PSEPU/214-315
 XYS4_PSEPU/214-315
 Y4FK_RHISN/318-417
 YA52_HAEIN/194-295
 YBBB_BACSU/166-264
 YBCM_ECOLI/165-262
 YCGK_ALTCA/67-163
 YD95_MYCTU/242-343
 YDEO_ECOLI/137-233
 YDIP_ECOLI/183-281
 YEAM_ECOLI/158-258
 YFIF_BACSU/192-289
 YHIW_ECOLI/139-236
 YIDL_ECOLI/197-295
 YIJO_ECOLI/172-270
 YISR_BACSU/183-281
 YKGA_ECOLI/19-117
 YKGD_ECOLI/177-278
 YMCN_STRLA/184-281
 YPDC_ECOLI/184-282
 YQHC_ECOLI/213-311

SKSAVALRLTAR...PILDIALQYRFDSSQOTTFRAFKKQFAQTPALYRRS
 LLAAVELRTTER...PIFDIANDLGYVSQQTFSRVFRQDRTPSDYRHR
 LLAAVELRTTER...PIFDIANDLGYVSQQTFSRVFRREFDRTSPDYRHR
 SYSISLMKTGEF...KIKQIAYSGFASVSFTSVFKSTNNVAPSEYLFM
 TKAAVELRLTKK...TILEIALKIQFDSQOSTRRFKYIFKVTPSYRRN
 QKAPKDLLRADPaeGVTEIAQWGFHLHVGFPAGEYKQTFGVSPSEDLRT
 GMAINYLTFSNY...SVFQISHRCGFGSNAYFCDAFKRYGTMTPSQFRLQ
 PIALNYLTFSNY...SVFQISHRCGFGSNAYFCDAFKRYGTMTPSQFRTQ
 HHAAKLLNLSQS...YINDVSRLLIGISSPSYFIRKENEYVIGITPKFYLY
 LYAHQLLNGKM...SIVDIANEAGFSSQSYFTQSYRRFGCTPSQARLT
 AQAARYLAQPL...YLSQIAVLLGYSEQALNRSRRWFGMTPROYRAY
 EKARSLLISTTL...SINEISQMCQPSIQYFYVSFKKAYDTTPKBYRDV
 SPAKNLLQOTDI...SIKEITEICGYPISQYFYVSFKKEFEMTPKEFRLN
 ESIRACINDPSANVTSITEALDYGFLHGRFAENYRSFAFGLPBDTLRQ
 ESIRACINDPSANVTSITEALDYGFLHGRFAENYRSFAFGLPBDTLRQ
 ECVRACLSNPTThixSITEVALDYGFLHGRFAEKYRSTFGELPBDTLRL
 ECIRARLSDPNANVTSITEVALDYGFFHTGRFAENYRSTFGELPBDTLRR
 ECIRARLSDPNANVTSITEVALDYGFFHTGRFAENYRSTFGELPBDTLRR
 AAAHGAIKAGRAG...SITEALNLFQSNPGRFSVLYKSAYGLSPSSALRF
 QSAAFLLKQSQ...SVLAIALEVGYQSEAHFKVFNKYYQLSPSQYRKS
 TKAKRLMAKSN...KLKEIAHQTYODEFYFSRIFKKYTGCSPTSVMKK
 NNALSIAIQTIVK...PISEIARENGYKCPSRFTTERFHNFNITPREIRKA
 EQAKKVLKK--...SVTETAYEVGFNNSNYFATVFKKRTNITYTPKQFRT
 TVAVDLLRNVL...TVQOVSTRLGTEVSTFSAFKRWYGVAPSEYSRR
 QHAKNLRVVG...SVNKIAEQCGYASTSYFYAFKHFHNSPKRVSK
 TEAKWLSLNTL...SQABISWRVGVENVDFHAKFLRHVGGCSPDYRRQ
 IMALQGLVKGD...TVQKVAHTLGYDSTTAFITMFKKGLQOTPGRYIAR
 NKAABELLKSTNL...SIKEIAEEIGFS-VHYFTRVFSAKIGSSPGLFRSL
 SMARLLELRQI...PLHTIAEKCGYSTSYFINTFRQYGVTPHQFAQH
 DLALSLLKQQGN...SVGEVADTLNFFDSFHFSKAFKHKFGYAPSAVLKN
 EHAKTLLKGYDL...KVKEVAHACGFVDSNYFCRLFRKNTERSPSEYRRQ
 TEAKRLLSSTND...KMGVIAETVGMEDPTYFSKLFKQIEGISPIEYRKI
 CRAIIVRLTAK...SMLDIALSLHFDSSQSPSREFKLFKFCSPREYRHR
 QIAAQMSRETL...PVVIVAESVGYASESSEHKAFAVREFGCTPGEYRER
 QRAIRLARAGV...PFAETATLAGFADQAHARDVREMGSSLSSELVER
 AKARMILQXYHL...SIEVAQRCGFPPDSYFCRVFRFRQGLTPGEYSAR
 HKARMWIIHDGM...KASAAAMRVGYESASQFSREFKRYFTGVTGGEAAR

Figure 1E.

MarA protein (BAA15221)

MTMSRRNTDAITHSILDWIEDNLESPLSLEKVSESRGYSKWHLQRMFKKETGHSLGQYI
RSRKMTEIAQKLKESNEPILYLAERYGFESQQTLTRTFKNYFDVPPHKYRMTNMQGESR
FLHPLNHYS

Rob protein (AAC73403)

MRYDKELTENEMIRQKILQQLLEWIECNLEHPISIEDIAQKSGYSRRNIQLFRNFMHVPL
GEYIRKRRL
CRAAILVRLTAKSMLDIALSLHFDSQQSFSREFKKLFGCSPREYRHRDYWDLANIFPSFLI
RQQQKTECR
LINFETPIFGNSFKYDIEVSNKSPDEEVKLRRHHLARCMKNFKTDIYFVSTFEPSTKSVD
LLTVETFAGTVCEYADMPKEWTTTRGLYDPHVIWTQA

SoxS protein (P22539)

MSHQKIIQDLIAWIDEHIDQPLNIDVVAKKSGYSKWYLQRMFRTVTHQTLGDYIRQRRL
LLAAVELRTTERPIFDIAMDLGYVSQQTFSRVFRQFDRTPSDYRHRL

Figure 2

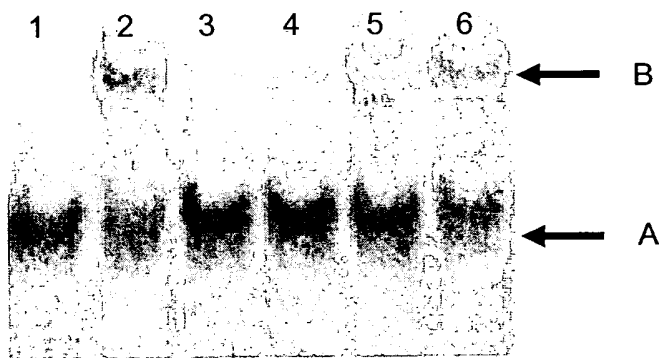
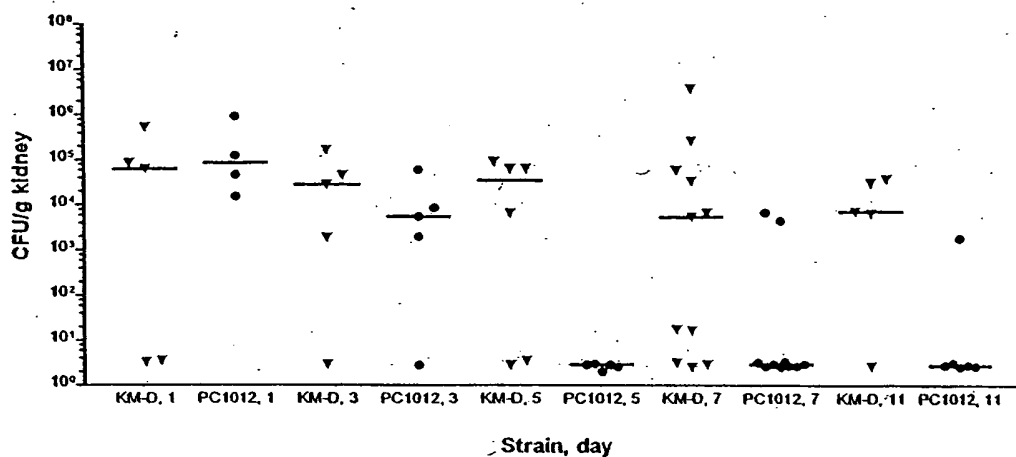


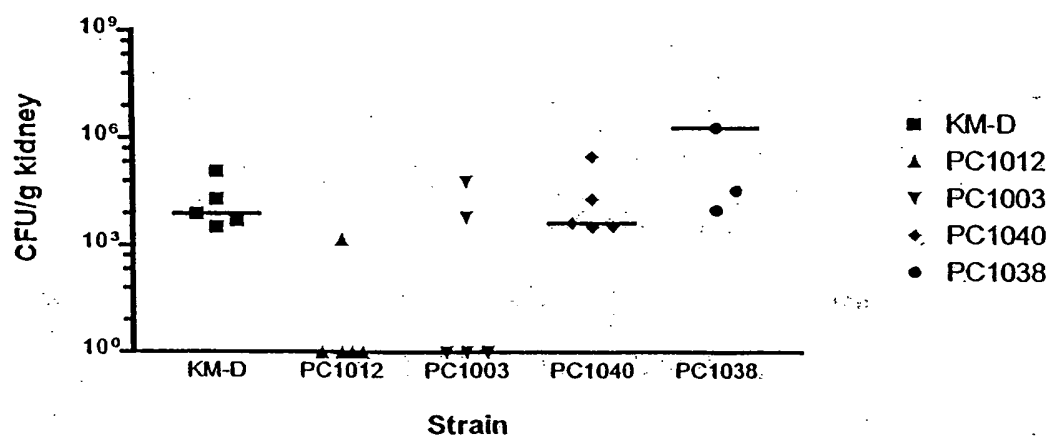
Figure 3



- ▼ KM-D, 1
- PC1012, 1
- ▼ KM-D, 3
- PC1012, 3
- ▼ KM-D, 5
- PC1012, 5
- ▼ KM-D, 7
- PC1012, 7
- ▼ KM-D, 11
- PC1012, 11

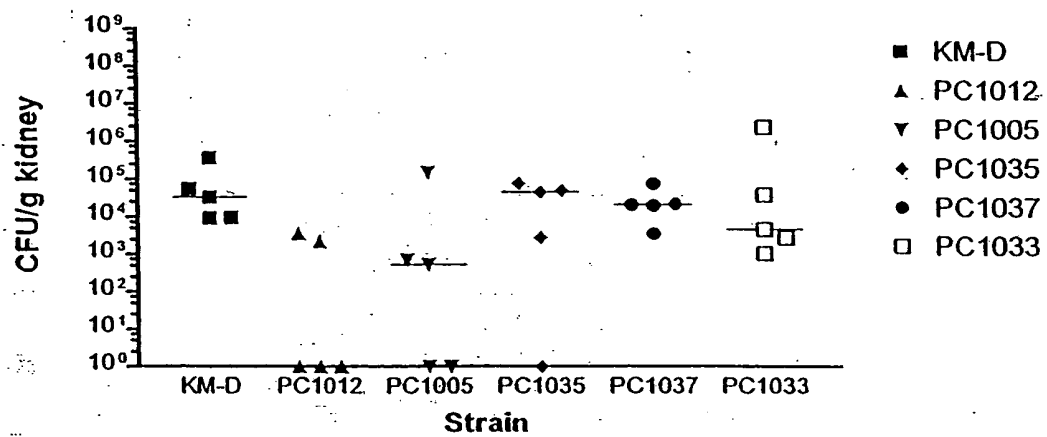
Strains compared	Student's <i>t</i> -test values (p)
KMD vs. PC1012, day 1	0.249
KMD vs. PC1012, day 3	0.752
KMD vs. PC1012, day 5	0.018
KMD vs. PC1012, day 7	0.038
KMD vs. PC1012, day 11	0.017

Figure 4.



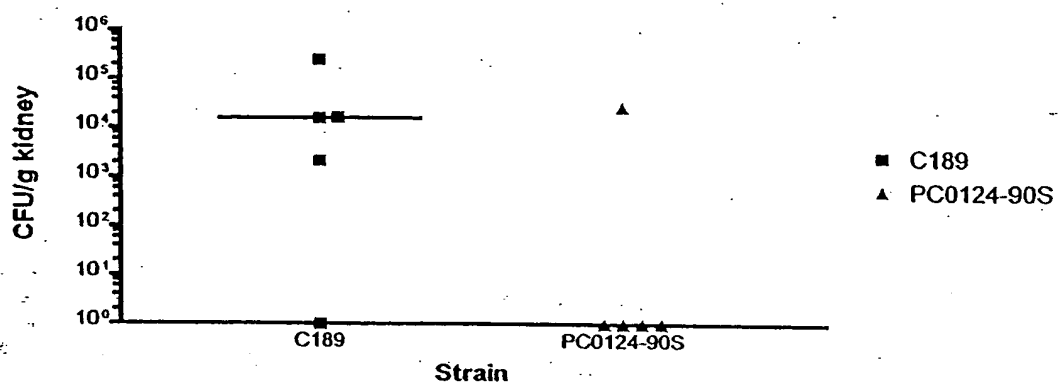
Strains compared	Student's <i>t</i> -test values (p)
KMD vs. PC1012	0.001
KMD vs. PC1003	0.061
KMD vs. PC1040	0.990
KMD vs. PC1038	0.042

Figure 3



Strains compared	Student's <i>t</i> -test values (p)
KMD vs. PC1012	0.007
KMD vs. PC1005	0.002
KMD vs. PC1035	0.318
KMD vs. PC1037	0.455
KMD vs. PC1033	0.477

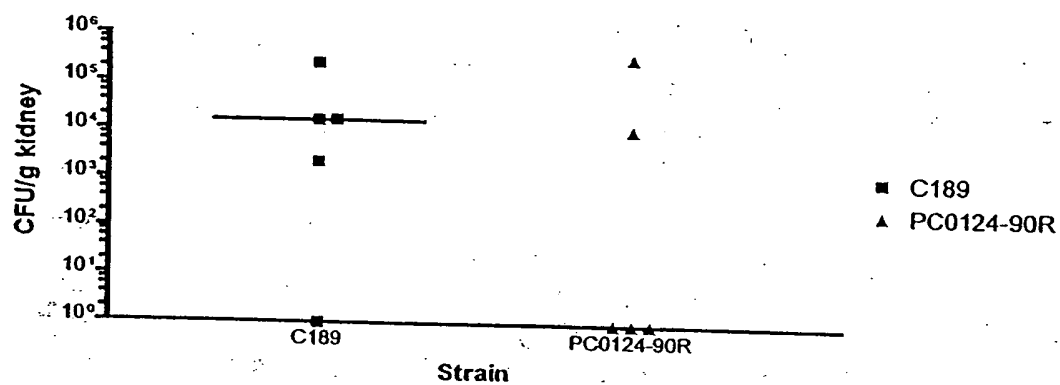
Figure 6



Strain
C189 vs. PC0124-90S

Student's t-test
0.082

Figure 7



Strain	Student's t-test
C189 vs. PC0124-90R	0.389

Figure 8.

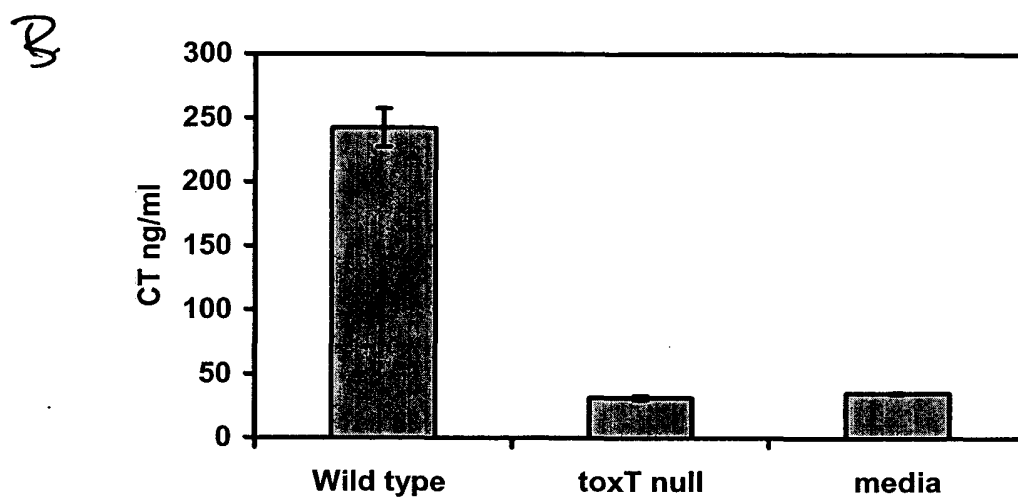
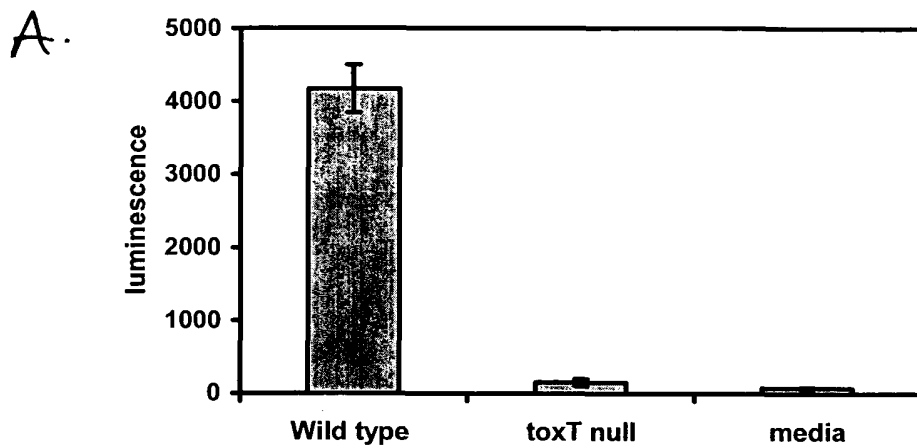


Figure 9

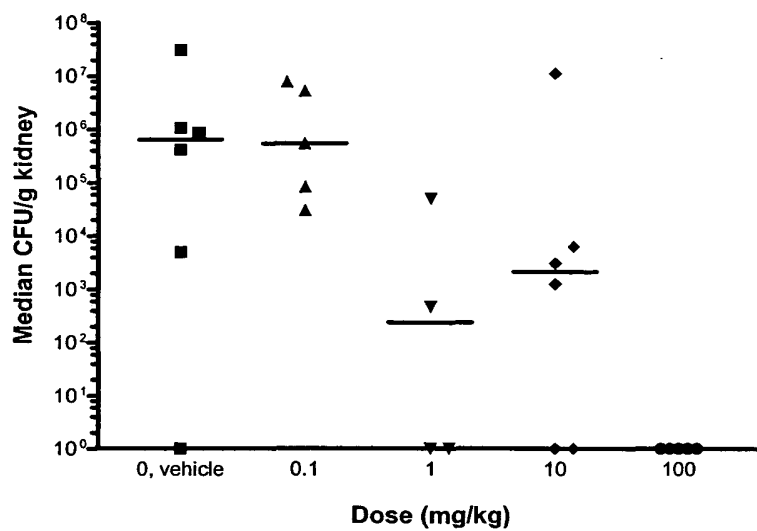


Figure 10